



# U.S. INTERNATIONAL CHRISTIAN ACADEMY

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U.S.I.C.A.Course Outline/Syllabus		
<b>Grade/Course: ALGEBRA II 1200330</b> <b>Grade Level:10<sup>TH</sup>High School</b>		
<b>A)TEXT BOOK: ALGEBRA II by Berchie Holliday Publisher: McGraw-Hill Higher Education</b> <b>ISBN- ISBN: 0078279992 - ISBN13: 9780078279997</b>		
<b>Order No.:</b> 1	<b>Code:</b> MAT1001	<b>Class Type:</b> Online
<b>Resources:</b> Text book Teacher works CD Teacher interactive online Skype Links Sky Conference Zoom, Social Media	<b>Length:</b> 1 year	<b>Instructional Supports:</b> Textbook, Magazines, Journals, Websites Links, Video Conference, Comprehensive Reading Plan, Videos, Skype, Zoom, e-Library, Social Media
<b>Area:</b> Mathematics	<b>Credits:</b> 1	<b>Total Numbers of class hours:</b> 300 hrs
<b>Type:</b> Mandatory	<b>Standards:</b> Florida Standards <a href="http://www2.dadeschools.net">www2.dadeschools.net</a>	<b>Prerequisite:</b> Students must have successfullyAlgebra I

## **B) Description:**

Algebra II is a full-year, high school math course intended for the student who has successfully completed the prerequisite course Algebra I. This course focuses on algebraic techniques and methods to develop student understanding of advanced number theory, concepts involving linear, quadratic and polynomial functions, and pre-calculus theories. This course also integrates geometric concepts and skills throughout the units, as well as introducing students to basic trigonometric identities and problem solving.

## **C) Objectives:**

Upon completion of this course, the students will be able to:

1. Understand set notation and the structure of mathematical systems.
2. Use functional notation and operations on functions.
3. Simplify and solve algebraic fractions.
4. Perform operations on polynomials, including factoring, long division, and synthetic division.
5. Solve algebraic word problems involving mixtures, money, integers, and work.
6. Evaluate and solve radical expressions and equations.
7. Solve systems of equations with graphing, substitution, and matrices.
8. Graph and solve quadratic equations, including conic sections.
9. Graph and solve exponential and logarithmic equations.
10. Calculate permutations, combinations, and complex probabilities.
11. Demonstrate an understanding of the geometry associated with functions by solving problems involving graphical representations of their algebraic counterparts.

## **D) Contents**

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Chapter 12 Probability and Statistics 630

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## **E. Methodology**

<b>E)Academic Methodology:</b>	
Tests	30%
Assignments	50%
Final Exam	20%

## **F) Book Reference:**

1. Mathematical Proofs: A Transition to Advanced Mathematics (3rd Edition) (Featured Titles for Transition to Advanced Mathematics) [Hardcover]
2. Advanced Mathematical Concepts [Hardcover] Berchie W. Gordon-Holliday, L. E. Yunker, Glen D. Vannatta and F. Joe Crosswhite (Authors)
3. Mathematical Reasoning: Writing and Proof Paperback– by Ted Sundstrom(Author)

#### **H) Web Reference:**

[www.math.com](http://www.math.com)

<http://www.calculatorsoup.com/calculators/math/>

[www.math.tamu.edu/mathlinks.html](http://www.math.tamu.edu/mathlinks.html)

[www.mathworld.wolfram.com](http://www.mathworld.wolfram.com)

[www.warez-files.com/Advanced-Engineering-Mathematics](http://www.warez-files.com/Advanced-Engineering-Mathematics)

[www.testprepreview.com/modules/mathematics3.htm](http://www.testprepreview.com/modules/mathematics3.htm)

[www.webmath.com](http://www.webmath.com)

[www.homeschoolmath.net](http://www.homeschoolmath.net)

<http://www.homeworksimplified.com>

[www.homeschoolmath.net](http://www.homeschoolmath.net)

<http://school.discoveryeducation.com/homeworkhelp/webmath/>

<http://www.cut-the-knot.org/content.shtml>

<http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrigIntro.aspx>

<http://www.sosmath.com/>

<http://www.ams.org/mathscinet>

<http://www.aaamath.com>

<http://www.algebrahelp.com>

#### **I. Journals:**

Advances in Applied Mathematics

Advances in Difference Equations

Advances in Differential Equations

Advances in Mathematics

Advances in Theoretical and Mathematical Physics

Algebra & Number Theory

Algebraic & Geometric Topology

American Journal of Mathematics

American Mathematical Monthly

Analysis and Applications

#### **J. Magazines:**

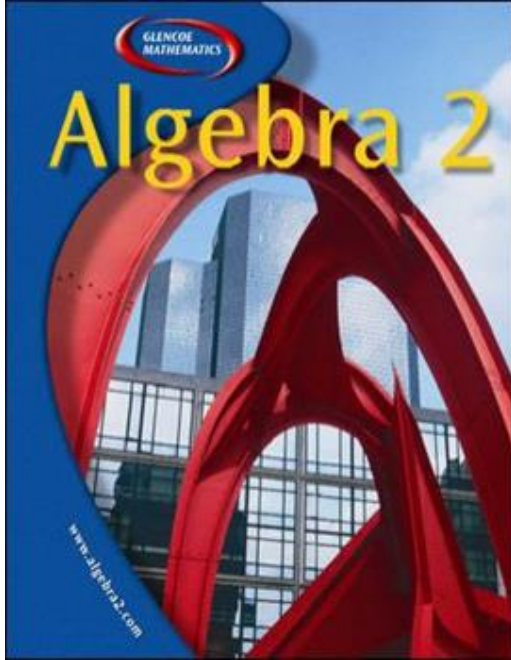
Math Horizons

Millennium Mathematics

#### **K. Organizations:**

National Council of Teachers of Mathematics (N.C.T.M.)

**BOOK:**



**Text Book: ALGEBRA II**

**Course: No. 1200330**

by [Berchie Holliday](#) Publisher: McGraw-Hill Higher Education

ISBN- ISBN: 0078279992 - ISBN13: 9780078279997

**ACADEMIC MISCONDUCT:**

Academic misconduct includes cheating (using unauthorized materials, information, or study aids in any academic exercise), plagiarism, falsification of records, unauthorized possession of examinations, intimidation, and any and all other actions that may improperly affect the evaluation of a student's academic performance or achievement, or assisting others in any such act or attempts to engage in such acts. Academic misconduct in any form is inimical to the purposes and functions of the school and therefore is unacceptable and prohibited.

Any faculty member, administrator or staff member may identify an act of academic misconduct and should report that act to the department head or administrative supervisor.

Students violating the standards of academic honesty are subject to disciplinary action including reduction of a grade(s) in a specific course, assignment, paper, or project; a formal or informal reprimand at the professorial, dean, or academic vice president level; expulsion from the class in which the violation occurred; expulsion from a program; or expulsion from the school.

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